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Provided are a multiplexing circuit for multiplexing a memory output signal output by a memory for temporarily accumulating a low-order group signal with an overhead bit necessary for optical digital transmission and a pattern generation circuit for generating an unfixed pattern having no fixed value. An unfixed pattern is applied to the multiplexing circuit while the memory outputs a fixed pattern. A selection circuit provided between the multiplexing circuit and the memory selects an unfixed pattern between a fixed pattern output by the memory and an unfixed pattern output by the pattern generation circuit.